Korvet 19 LongRange

Basic Dimensions and Capacities

Length over all	1890cm
Beam	500cm
Draft deepest point	140cm under WL
Draft hull	75cm under WL
Displacement no load	23 metric ton
Air Draft mast down	430cm above WL
Air Draft mast up	685cm above WL
Fuel Capacity	6.850l
Range	> 3.000 NM in eco mode
Fresh Water Capacity	1.350l
Black Water Capacity	Bow 670l, midships 265l
Main Engines (twin)	John Deere 4045SFM85 M4 275hp (205kW) @ 2600rpm
Transmissions	ZF85IV v-drive
Cruise Speed	9-10 knots, dependent upon engine/propeller pkg.
Top Speed	>18 knots, dependent upon engine/propeller pkg.
Classification	CE Cat A – Offshore, Unlimited

Overview

Built for strength, performance and range the **Korvet 19 LongRange** is the ultimate platform upon which to engage any ocean or sea. Timeless naval lines captured in high grade Aluminium – designed and engineered to the highest standards - make this yacht rugged, seaworthy and autonomous. The Korvet 19 Long Range is Ideally suited to brace harsh oceanic conditions while at the same time she provides the shallow draught needed for exploring inland waterways, tidal inlets or even dry out on a mudflat.

Built under the CE-A category, this Dutch design yacht has all the qualities of an exploration vessel enabling ocean crossings and long periods of living aboard in comfort and safety.

The Korvet 19 LongRange is fully designed and crafted in the Netherlands.

General Layout

The aft swim platform provides easy access to water, dock, and dinghy. Integral to the transom is a garage that allows the dinghy to be launched and retrieved and provide storage for the outboard engine, fenders and equipment. Inside the garage, a watertight door allows for access to the engine room.

Stairs on both port and starboard side lead from the swim platform to the aft deck. The interior aft deck with its side coamings and rail provides a secure area to lounge and dine. The fixed settee sits up to four for meals.

The roof covering the aft deck provides ample coverage of the interior aft deck space for sun or rain protection.

Two generous glass entry doors on port and starboard side provides access to the pilot house and the helm. On starboard side at the entry door is a wet locker. To port side upon entering the dining table is located with six comfortable seats. Storage cabinets line the sides of the pilot house. The galley makes for a separation between the dining area and the helm.

The galley provides safe sea-going ergonomics. A double stainless steel sink, induction cook top with exhaust and oven with microwave. A refrigerator and dishwasher plus generous cabinets, waste and drawer space.

Forward of the galley is the bridge with a large ergonomic layout for navigational equipment and engine and operational controls. Two comfortable helm seats provides excellent view to all sides with a starboard side desk for maps and laptops. On port side where the galley top ends, a sofa extends all the way to the large forward windows, providing a place to sleep, rest or sit while being on the same level as the helm seat.

On starboard side midships a stair gives access to the fly bridge through a transparent hatch. The fly bridge has seating for two and ample space to lie down and enjoy the view and the sun. Engine controls, follow-up joystick and navigational screens are ergonomically positioned.

The starboard steps take you down to the salon that straddles the full breadth of the yacht. Ample cabinets and a large sofa with lounge table provide for a secluded yet open, light and airy living space. The large panorama windows allow a view to the outside while drenching the lounge with daylight. Overhead deck hatches for alternative access, ventilation and daylight.

From the sofa one enjoys the entertainment center on the bulkhead of the forward watertight compartment. Two comfortable seats complement the salon.

From the salon a watertight door provides entry to the forward cabin that consists of two areas, separated by a light wall that is off center to enlarge the starboard cabin. This cabin is the double guest bedroom and has access to a bathroom with separate shower, toilet and washbasin. The bathroom is also accessible from the port cabin that may be used for storage but also functions as a crew bunk. An opening portlight provides natural lighting and natural ventilation while the escape hatches overhead provide light and access to the forward deck. Alternatively, the forward cabin can be outfitted as one large bedroom.

Aft of the salon on port side is a small office area with a fixed desk, bench and cabinets. Past the desk one enters the master bedroom with its large walk around double bed. The owners cabin is outfitted with hanging lockers and plenty of drawer and storage space. The generous bathroom separates the bedroom from the salon and features a large shower stall, washbasin and toilet. The washing machine/dryer combination can also be accessed from the bathroom. The owners cabin has opening hull portlights both port and starboard for natural lighting and for ventilation.

The aft bulkhead of the bedroom makes for a watertight and soundproof partition with the engine room. A watertight door, lockable from the owners cabin side, provides access to the engine room from the bedroom. The engine room has walk-around headroom with easy access to engines and systems to ensure ease of upkeep and maintenance.

Construction

The Korvet features a round bilged hull with a single chine at the level of the waterline. A bulb or wave piercer at the bow extends the waterline and aids with tracking. It can handle light ice conditions by breaking and deflecting thin ice built up. All hull plating and construction material is Lloyds certified 5083-H321 or 5083-H116 aluminum. Minimum 8 and 7mm bottom plating to waterline, 5-6mm plating on topsides. Three watertight bulkheads plus one crash bulkhead at the forward end of the forepeak confine the possible ingress of water to a closed compartment. The heavy crash bulkhead is watertight and provides the first line of defense against any impact to the bow. Under all forward and mid-ship accommodation, integral tankage is constructed into the hull structure forming a double bottom to mitigate risk of water ingress after an underwater collision while at the same time ensuring weight distribution is to the lowest point of the vessel.

Stabilization

The choice of a stabilizing system depends on the need for stabilization at anchor, underway or both. Traditional fin systems like Humphree – either in combination with interceptors - are ideal for this boat. Alternatively, the MagnusMaster system has proven its stabilizing capability from very low speeds upwards.

Tanks

Fuel, water, and waste tanks are integral with the hull, forming a double bottom in critical areas and adding to the strength and stiffness of the entire hull construction. Tanks have internal baffles and top access ports for inspection/cleaning. An optional day-tank in the engine room is designed to aid in effectuating the engine fuel filtration system. Fuel tanks are joined through an ingenious manifold. Sender units to provide fluid level indicator system for all tanks. Water tanks are coated with a protective industrial component suitable for drinking water.

Mast

Mast to accommodate antennas, radar, horn, cameras and remote controlled search light. The mast can be mechanically lowered to allow minimal aerial draft for potential navigation of inland waters and canals.

Insulation

Application of EPDM, closed cell foam to hull and structure above the waterline will insulate the interior from both cold and heat, as well as mitigate condensation and structure borne noise and vibration. A sound damping compound will be applied around the engine room and above the propellers. Primary bulkheads to be constructed of noise reduction marine plywood.

Exterior finish

Hull to be untreated aluminum sanded in square pattern to 220 grit finish. Parts of the topside and upper structure to be sand/glass blasted to a satin finish. Side decks, aft deck, and swim step walking surfaces to be Flexiteek or similar cladding. The superstructure is partly covered with a 3M film in a color to be determined.

Stanchions and deck hardware

Stanchions and pulpits will be from stainless steel, fitted on protective bushings to avoid corrosion. Near the aft end of the cabin house are boarding gates to port and starboard. The top tube of the guard rail is of 42mm stainless steel while the lifelines between the top tube and deck are of 316 stainless steel 6mm wire. All deck hardware to be fastened without penetration into interior and isolated from aluminum with dielectric material. Threaded blind 'inserts" will be located on strategic places for securing deck gear.

Pilot house windows and entry door

Because of the thermal insulation between the inner and outer frame of the Gebo Thermic Line® marine windows there is virtually no condensation: visibility is therefore optimal. The insulation not only ensures that the cold stays outside, it also keeps the warmth inside. The window frames are anodized.

The entry door is of double glass allowing for a cold bridge to keep warmth inside and inhibit condensation. he roof of the pilot house over the helm area will be fitted with two large integrated hatches. A sliding side door on starboard side is optional.

A heavy duty wiper system with fresh water washing feature will be installed on the front windows of the pilot house. The motion of the wipers arms is synchronized and through a digital switch speed and interval can be set.

Deck mounted hatches

Accommodation hatches on the foredeck serve as escape exits, to ventilate and for allowing daylight in. They will be equipped with friction hinges, locking handles, secure vent position and screen and blackout shades. Access to the fly bridge is through a hatch in the pilot house.

Underwater hull protection

Under the waterline the paint system consists of multiple epoxy barrier coats to ensure maximum protection to plating with antifouling paint applied over. Barrier coat protection to extend above antifouling paint by 10cm and allow for application of painted waterline. Cathodic protection suitable for intended home waters will be fitted in recesses to both sides of the hull. Appropriate cathodic protection for rudders, propellers en bow and stern thrusters.

Interior design

The choice of materials and color scheme for the interior can be made from the standard selection available at the yard or be provided by the owner. The typical 'Korvet look" incorporates oiled teak with Aluminium style elements. Optional upgrades and deviations are possible. Wall covering or veneer on bulkheads. All doors and drawers to have 'soft close" mechanisms. Interior cabinetry in marine ply, solid timber and veneers.

Ergonomic helm chair. Seating for up to 6 around dining table. Furniture in the salon and its cushions in Alcantara.

Blinds on the side and aft window in the pilot house and on the hatches in the bedrooms. Optional automatic deployment control. Optional screen doors.

Galley

Galley and bathroom counter tops throughout have a solid composite surface. Under mount double stainless sink and industrial faucet. Four burner induction cook top with pan holders. Oven with built in microwave. Dishwasher for 9 covers. Refrigeration and freezer. Overhead/countertop cabinets installed in galley area. Doors and drawers soft close and positive lock hardware throughout.

Owners and guest cabins

The owners cabin features a large 180x200cm walk around bed. Cabinets and sets of drawers. Bathroom with large separate shower stall, washbasin and electric toilet. Washer/dryer combination. The guest cabin starboard forward has a double bed with ample cabinets and drawers. A comfortable bathroom is situated in the bow with large shower stall with ventilation, washbasin and electric toilet. A utility/crew cabin, located port forward, has a single bunk and abundant storage space as well as access to the shared bathroom in bow. Alternatively, the forward cabin can be outfitted as one large bedroom.

Interior lighting

Recessed LED spots and flood down lighting located throughout the interior accommodation space. Bulkhead LED reading lights to be installed at head of each berth. LED courtesy lights to be installed on stairs aft at strategic locations to allow movement at night. LED strip lighting installed as accent lighting in galley, salon and accommodation areas where appropriate. LED high output tube lights to be installed in engine room and garage. Wall mounted switches installed for on/off and dimming control of lighting circuits.

Engines and Drive train

- Twin John Deere 4045SFM85 engines with a M4 rating.
- Twin ZF85IV v-drive transmission with 2,493 reduction ratio.
- Twin Aquadrive B30 thrust bearings or similar.
- Axiseal® Mechanical propeller shaft seals.
- Twin ZF SmartCommander electronic engine control systems or similar type. Separate control unit for engines and thrusters on the flybridge.
- Twin 28" NiAlBr 4 blade propellers RH/LH. 50mm diameter stainless steel duplex4462 propeller shafts.

Engine controls

ZF SmartCommand™ electronic control system. The optional integrated ZF JMS™ joystick allows twin-engine motor yachts, with traditional shaft-line propulsion to easily maneuver the vessel in complex docking situations.

Fuel filtration and polishing

- Optional fuel polishing system comprised of hi-capacity gear pump offer fuel polishing filtration through a system that allows for transfer from any tank to any tank via valved manifolds.
- Dual Separ water separating fuel filters for each engine
- Separ single water separating fuel filter for all other consumers, generator and heating system.

Bow and Stern Thrusters

Hydraulic dual propeller bow thruster SH320 with control from the helm and variable thrust output with a thrust rating up to 21.3kW. Stern thruster SH240 rated 13.5kw.

Deck area

The aft deck features the exterior seating area with dining space for six. Up on the front deck the ROCNA 40 galvanized anchor. Hydraulic Maxwell VWC4000 windlass (or similar). 80 meter 10mm galvanized G70 hi-strength chain. Handheld remote control of windlass at the anchor and at the helm.

A hydraulic deck crane can be mounted on the forward deck for launching the dinghy stored up front or lifting supplies on board.

Navigation and External Lighting Systems:

LOPO LIGHT 3nm LED navigation lights will be installed: port and starboard, stern, steaming lights and 5nm anchor light. LED recessed lights for both fore and aft deck illumination. Aft deck seating arrangement will have waterproof LED courtesy lights. Remote controlled spotlight. A single trumpet chrome air horn system installed with push button control at helm.

Systems

Where cables penetrate watertight bulkheads, suitable sealing with expandable sleeve and heat expanding, fire resistant sealant will be used. All system parts and pieces will be mounted giving consideration to required maintenance and service. Electrical components (motors, pumps etc.) will be mounted so as to avoid water ingress or submersion.

Only 316 grade stainless steel or Aluminium fasteners will be used. NO brass/bronze fasteners or plumbing fittings except where supplied by equipment manufacturers with consideration given to the environment and possible substitutions.

Engine room ventilation is built into the aft side coamings and/or under the bench. Radial fan on intake to ensure proper ventilation of engine room.

Seawater management

The main engine seawater intake will be through a welded aluminum sea chest or tubes, installed with a water strainer with transparent top for visual inspection. Valved ports feed cooling water to the engines through wire reinforced hoses. Dedicated seawater take off pipes with valves for generator and aft deck wash down. Fore and aft seawater wash-down pumps with on-deck quick connect hose valves. Garage will have freshwater wash down hose with sprayer heads attached to the domestic water system with the option to select seawater feed. (aft will have hot/cold mixer valve).

Freshwater water

Tank levels will be monitored and displayed on C-Zone®/N2k monitoring system. Freshwater and black water tanks will be coated on the inside. The domestic water system plumbing will be done in polyethylene or PEX tubing. Shut-off valves will be installed in both hot/cold lines at every fixture.

A water maker is optional and can be included in the fresh water system for total independence from shore bound water supplies.

Black water

Electrical marine heads will be installed and flushed with fresh water. Toilets to drain into dedicated black water holding tanks. Holding tank level indicators can be monitored via C-Zone®/N2k system from the helm.

Each holding tank will have a vent line filter for odor control. PVC pipe will be used for the majority of toilet discharge plumbing. Where waste hose is required, then premium heavy-duty sanitation hose with warranty against odor permeation will be used. Entire installation will be engineered to avoid dips or bends that trap waste. Waste removal points via on-deck fittings and overboard waste pump on tank.

Bilge pump system

Bilge pumps will be placed in strategic areas throughout the yacht with independent systems in every watertight compartment. Bilge pumps are fitted with automatic detection switches. High water alarms will alert on a high water condition in the following areas: engine room, forepeak, accommodations, garage. Alarms at the helm are fitted with switches to override the automatic function to manually engage the bilge pumps.

Electrical systems

The vessel onboard power system will be 24 Volts and is based on Mastervolt technology where appropriate or a similar system. The system will allow for remote monitoring and control. The system will be fitted with an isolation transformer for safely using shore power, vital for Aluminium vessels to avoid electrolysis and corrosion.

Where cables penetrate watertight bulkheads, suitable sealing with expandable sleeve will be used. All cables will be identified with markings that align with cable schedules and schematics.

All installed heavy-duty fuses to be labeled and have a spare fuse wire tied or otherwise fastened nearby for easy change out.

Power distribution and monitoring

A C-Zone® (or similar) power distribution system, backbone and modules to be installed throughout the vessel. The entire system will thus be accessible through touch displays at the helm. A single button whole boat 'on/off" system is integral. All cabins will have primary lighting switches in addition to central touch screen control.

DC service and operational battery systems

The service battery bank consists of 12 units of 2V maintenance free batteries with a total capacity of 1.000 Ah. The engines start battery bank will consist of 2 Optima red top sealed, lead acid batteries wired in series for each engine. The generator start battery is an Optima red top 12VDC sealed, lead acid start battery. Batteries will be monitored through the C-Zone® system. An emergency switching system will allow engines to be started using the service batteries. Batteries are charged and monitored through the Mastervolt onboard systems.

AC power system

Primary AC will be supplied from shore power, the Kohler generator or from the MassCombi Ultra 24V inverter/charger with power share feature to synchronize and assist shore/generator set if necessary. Vessel shore power system to consist 230VAC 32A shore power inlet.

- Glendinning shore cable reel installed in garage for automatic winding of shore cable.
- Kohler 11EFKOZD 11kW 50Hz 230VAC generator fitted with exhaust gas/water separator and water lift muffler. Installed with double isolation mounts to prevent structure born noise.
- Mass Combi Ultra 24/3500-100 (230 V) battery charger and inverter in combination with a Mass GI 3.5 transformer with the option of automatically starting the generator when there is an AC current overload.

Navigational equipment

The center of the navigational system consists of a Simrad (or similar) NSO evo2 computer. The bridge will be equipped with two 19" touchscreens for display of charts, instruments, sensor data and C-Zone®. A 4G radar, NAIS-400 class-b and VHF RS90 system. A camera on the stern allows for monitoring the surroundings when docking. A camera with thermometer built in allows for monitoring of conditions in the engine room.

The fly bridge is equipped with engine controls, follow-up joystick, JMS joystick control and an extended Simrad navigational screen.

Entertainment system

A 45" smart TV with Blu-ray player will be mounted on the bulkhead in the salon area. An onboard router creates a local area network for consumers to connect to and for streaming internet services. The router connects through a 4G connection to shore networks or can alternatively pick up Wi-Fi signals from marina's and shore installations.

A 60cm satellite TV dome and receiver is optional.

A total of 6 speakers with integrated Sonos amplifier provide music on the aft deck, pilot house and salon. Music can be streamed through the domestic router. Only cabled connections between the router and amplifiers. Music system is optional.

Heating and cooling

For heating of the interior and for generating warm water, a PostMarine Caminus 20kW combi unit will be employed. An optional boiler, heated by the engines cooling water, can be installed for economizing on fuel during long trips.

Heating coils will be incorporated in the floor of the pilot house and the downstairs area, providing comfortable and silent heat dispersion throughout the vessel. Radiators support the heating system in strategic areas with units for drying towels and wet clothing.

The thermostat can controlled from outside the vessel. Turn on the heat beforehand so you always arrive in a comfortably heated boat.

An optional air conditioning system features air handlers in the salon, pilot house and master bedrooms. The air conditioning systems can be tuned to provide optimal cooling capacity dependent on the main deployment area.